

Amendment "B" page 2 of 6
10/020,407

DOCKET NO. 01-299
FETF: 71739

In the Claims:

1. (original): A method of detecting variations in a spatially correlated parameter comprising:
 - measuring a selected parameter of each of a plurality of electronic circuits replicated on a common substrate;
 - calculating a difference between a value of the selected parameter at a target location and that of an identical relative location with respect to the target location for each of the plurality of electronic circuits to generate a distribution of differences;
 - calculating an absolute value of the distribution of differences; and
 - calculating an average of the absolute value of the distribution of differences to generate a representative value for the residual for the identical relative location.
2. (original): The method of Claim 1 further comprising plotting the residual as a function of the identical relative location to determine a spatial correlation pattern of the selected parameter.
3. (original): The method of Claim 1 wherein the electronic circuit is an integrated circuit die and the common substrate is a silicon wafer.
4. (original): The method of Claim 1 wherein the selected parameter is quiescent current.
5. (previously amended): A method of detecting variations in a spatially correlated parameter comprising:
 - measuring a selected parameter of each of a plurality of

Amendment "B" page 3 of 6
10/020,407

DOCKET NO. 01-299
FETF: 71739

electronic circuits replicated on a common substrate;
calculating a difference between a value of the selected
parameter at a target location and that of an identical
relative location with respect to the target location for each
of the plurality of electronic circuits to generate a
distribution of differences;

calculating an absolute value of the distribution of
differences;

calculating an average of the absolute value of the
distribution of differences to generate a representative value
for the residual for the identical relative location; and

performing a lot averaging for each wafer X-Y coordinate
so that a new set of best estimates is re-calculated for each
X-Y position.

6. (previously amended): A method of detecting
variations in a spatially correlated parameter comprising:
measuring a selected parameter of each of a plurality of
electronic circuits replicated on a common substrate;
calculating a difference between a value of the selected
parameter at a target location and that of an identical
relative location with respect to the target location for each
of the plurality of electronic circuits to generate a
distribution of differences;
calculating an absolute value of the distribution of
differences; and
calculating an average of the absolute value of the
distribution of differences to generate a representative value
for the residual for the identical relative location wherein
the common substrate comprises a plurality of common
substrates wherein best estimates for a given X-Y location are
identical to those of a corresponding location on another of

Amendment "B" page 4 of 6.
10/020,407

DOCKET NO. 01-299
FETF: 71739

the plurality of common substrates.

7. (original): The method of Claim 6 further comprising re-ordering the plurality of common substrates in a same order in which they were processed.

8. (original): A process for reducing the variance of a selected parameter in a production lot of integrated circuits comprising:

measuring a selected parameter of each of a plurality of integrated circuit die replicated on a wafer substrate;

calculating a difference between a value of the selected parameter at a target location and that of an identical relative location with respect to the target location for each of the plurality of integrated circuit die to generate a distribution of differences;

calculating an absolute value of the distribution of differences;

calculating an average of the absolute value of the distribution of differences to generate a representative value for the residual for the identical relative location having an expected value range of the selected parameter at the identical relative location; and

rejecting any of the plurality of integrated circuit die having a value of the selected parameter that lies outside the expected value range.

9. (original): The process of Claim 8 further comprising plotting the residual as a function of the identical relative location to determine a spatial correlation pattern of the selected parameter.